a linearly movable frame movable by said cam ring along an optical axis of an optical system without rotating, by engagement of a plurality of cam groove groups located on said cam ring with a plurality of cam follower groups located on said linearly movable frame when said cam ring is rotated, said linearly movable frame supporting at least one optical element of said optical system,

wherein said plurality of cam groove groups are located at different positions in a circumferential direction of said cam ring, and wherein each said cam groove group comprises at least two cam grooves located at different positions in at least said optical axis direction and respectively trace substantially a same reference cam diagram;

wherein at least one of said two cam grooves of one said cam groove group intersects with another of said two cam grooves of another said cam groove group, said another said cam groove adjacent to said at least one said cam groove in said circumferential direction;

wherein said plurality of cam follower groups are located at different positions in a circumferential direction of said linearly movable frame, and wherein each cam follower group comprises at least two complementing cam followers located at different positions in said optical axis direction and are engageable with said at least two cam grooves of each said cam groove group, respectively; and

wherein in each said cam groove group, at least one of said at least two complementing cam followers of each said cam follower group remains engaged in a corresponding one of said at least two cam grooves when another cam follower of said

at least two complementing cam followers passes through an intersection area of said intersecting cam grooves during a rotation of said cam ring.

2. (Original) The cam mechanism according to claim 1, wherein said intersecting cam grooves are located at different positions in said optical axis direction.

3. (Original) The cam mechanism according to claim 1, wherein in each said cam groove group, each said cam groove is a partial cam groove having at least one end opening at at least one of opposite ends of said cam ring, so as not to include an entire portion of said reference cam diagram; and

wherein in each said cam groove group, at least one cam follower of said at least two complementing cam followers remains engaged in a corresponding one of said at least two cam grooves, while another of said at least two complementing cam followers comes out of said end opening of corresponding another cam groove of said at least two cam grooves.

4. (Original) The cam mechanism according to claim 1,

wherein said reference cam diagram includes a zooming range and is configured to perform a zooming operation; and

wherein in each said cam groove group, the intersection of said intersecting cam grooves is outside said zooming range.

5. (Original) The cam mechanism according to claim 1, wherein each of said plurality of cam groove groups comprises a first cam groove and a second cam groove, and wherein each of said plurality of cam follower groups comprises a first cam follower

and a second cam follower which are engaged in said first cam groove and said second cam groove, respectively.

6. (Original) The cam mechanism according to claim 5, wherein both said first cam groove and said second cam groove of each said cam groove group include said intersection.

7. (Original) The cam mechanism according to claim 6, wherein said first cam groove of each said cam groove group intersects said second cam groove of another cam groove group.

8. (Original) The cam mechanism according to claim 1, wherein said optical system comprises a plurality of movable lens groups movable in said optical axis direction while changing a distance therebetween by a rotation of said cam ring, said linearly movable frame supporting at least one of said plurality of movable lens groups.

9. (Original) The cam mechanism according to claim 1, wherein said optical system comprises a photographing lens system.

10. (New) A digital camera having a body and a cam mechanism housed within the body, and an image display panel affixed to the body, the cam mechanism comprising:

a cam ring; and

a generally linearly movable frame movable by said cam ring along an optical axis of an optical system, by engagement of a plurality of cam groove groups located on said cam ring with a plurality of cam follower groups located on said linearly movable frame when said cam ring is rotated, said linearly movable frame supporting at least one optical element of said optical system,

wherein said plurality of cam groove groups are located at different positions in a circumferential direction of said cam ring, and wherein each said cam groove group comprises at least two cam grooves located at different positions in at least said optical axis direction and respectively trace substantially a same reference cam diagram;

wherein at least one of said two cam grooves of one said cam groove group intersects with another of said two cam grooves of another said cam groove group, said another said cam groove adjacent to said at least one said cam groove in said circumferential direction;

wherein said plurality of cam follower groups are located at different positions in a circumferential direction of said linearly movable frame, and wherein each cam follower group comprises at least two complementing cam followers located at different positions in said optical axis direction and are

engageable with said at least two cam grooves of each said cam groove group, respectively; and

wherein in each said cam groove group, at least one of said at least two complementing cam followers of each said cam follower group remains engaged in a corresponding one of said at least two cam grooves when another cam follower of said at least two complementing cam followers passes through an intersection area of said intersecting cam grooves during a rotation of said cam ring.

11. (New) The camera according to claim 10, wherein said intersecting cam grooves are located at different positions in said optical axis direction.

12. (New) The camera according to claim 10, wherein in each said cam groove group, each said cam groove is a partial cam groove having at least one end opening at at least one of opposite ends of said cam ring, so as not to include an entire portion of said reference cam diagram; and

wherein in each said cam groove group, at least one cam follower of said at least two complementing cam followers remains engaged in a corresponding one of said at least two cam grooves, while another of said at least two complementing cam followers comes out of said end opening of corresponding another cam groove of said at least two cam grooves.

13. (New) The camera according to claim 10,

wherein said reference cam diagram includes a zooming range and is configured to perform a zooming operation; and

wherein in each said cam groove group, the intersection of said intersecting cam grooves is outside said zooming range.

14. (New) The camera according to claim 10, wherein each of said plurality of cam groove groups comprises a first cam groove and a second cam groove, and wherein each of said plurality of cam follower groups comprises a first cam follower and a second cam follower which are engaged in said first cam groove and said second cam groove, respectively.

15. (New) The camera according to claim 14, wherein both said first cam groove and said second cam groove of each said cam groove group include said intersection.

16. (New) The camera according to claim 15, wherein said first cam groove of each said cam groove group intersects said second cam groove of another cam groove group.

17. (New) The camera according to claim 10, wherein said optical system comprises a plurality of movable lens groups movable in said optical axis direction while changing a distance therebetween by a rotation of said cam ring, said linearly movable frame supporting at least one of said plurality of movable lens groups.

18. (New) The camera according to claim 10, wherein said optical system comprises a photographing lens system.